WHAT IS CLAIMED IS:

1. A method for managing temperature of a device which receives variable power for a first and second operation mode, the method comprising:

determining power variance for said first and second operation modes; and

delivering a compensation power equivalent to said power variance to a heater for increasing temperature of said device, said compensation power is based on a delivery voltage, delivery current and resistance of said heater; and

said compensation power is cooperable with a corresponding operation mode power for providing approximately equivalent device temperature for each of said first and second operation modes.

2. The method of Claim 1, wherein said first operation mode is a read mode and said second operation mode is a write mode, and wherein a write mode operation current is greater than a read mode operation current.

3. The method of Claim 1 further including maintaining said delivery voltage at a constant voltage, wherein said delivery current is varied corresponding to a variance in resistance of said heater.

4. The method of Claim 1 further including:

determining a resistance of said heater, wherein said heater resistance varies with temperature; and

adjusting said delivery current for maintaining said compensation power based on said determined resistance, wherein said delivery voltage is maintained constant.

5. The method of Claim 4, wherein said determining a resistance includes sensing a current received at said heater and determining said resistance from said sensed current and said delivery voltage.

6. The method of Claim 5, wherein said sensing further includes providing a sensed current value which is only a small portion of said current received at said heater.

7. The method of Claim 1, wherein said heater is provided in a heat transfer relationship with said device.

8. The method of Claim 1 further including determining heat variance of said device between said first operation mode and said second operation mode.

9. The method of Claim 1, wherein said device is a magneto-resistive head used for reading and writing information to a magnetic media responsive to respective control currents, wherein a determinable amount of heat is delivered to said head based on said control current and a resistance of said head.

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10. A disk drive system comprising:

a magneto-resistive head for reading and writing information to a magnetic media responsive to respective control currents, wherein a determinable amount of heat is delivered to said magneto-resistive head corresponding to said respective control currents and a resistance of said magneto-resistive head; and

a control device coupled with said magneto-resistive head for maintaining said magneto-resistive head at a substantially constant temperature during both reading and writing modes.

11. The disk drive system of Claim 10, wherein said control device is integrated in a silicon chip.

12. The disk drive system of Claim 10 further including:

circuitry adapted to determine a difference in heat delivered to said magneto-resistive head during said read mode and said write mode; and

further circuitry for applying an amount of heat to said magneto-resistive head which compensates for the difference in heat due to said reading control current and said writing control current.

13. The disk drive system of Claim 10 further including:

circuitry adapted to determine a difference in power delivered to said magneto-resistive head during said read mode and said write mode; and

further circuitry for applying an amount of heat corresponding to said power difference to said magneto-resistive head for compensating for the difference in heat due to said reading control current and said writing control current.

14. The disk drive system of Claim 13, wherein said writing control current is greater than said reading control current and said compensating heat is only delivered to said magneto-resistive head during said read mode such that substantially equal heat is delivered to said magneto-resistive head during both reading and writing modes.

15. The disk drive system of Claim 13, wherein said heat to said magneto-resistive head for compensating for the difference in heat between modes is provided by delivering a corresponding amount of power to a resistive heater which is provided in a heat transfer relationship with said magneto-resistive head.

16. The disk drive system of Claim 13 further including a resistive heater coupled in a heat transfer relationship with said magneto-resistive head, wherein a compensating power equal to said difference in power is delivered to said heater.

17. The disk drive system of Claim 16 further including a sensor for determining current delivered to said heater, wherein a resistance of said heater varies over a range of temperature and said current delivered to said heater is varied corresponding to said heater resistance variance to provide said compensating power at a constant voltage.

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18. A device for managing temperature of a magneto-resistive head in a disk drive in which respective control currents are delivered to said magneto-resistive head during each of a read mode and a write mode, wherein said write mode current is greater than said read current, said device comprising:

circuitry adapted to determine a difference in power delivered to said magneto-resistive head during said read mode and said write mode; and

further circuitry coupled with said circuitry and adapted for applying an amount of heat during said read mode corresponding to said power delivery difference for compensating for the difference in heat due to the greater writing mode current.

19. The device of Claim 18 further including a heater coupled with said further circuitry and adapted for coupling in a heat transfer relationship with said magneto-resistive head, said further circuitry adapted to deliver a compensating power signal equal to said difference in power to said heater during said read mode.